

AMENDMENTS TO THE CLAIMS

Listing of claims:

1. (Previously Presented) A method for synchronizing configuration data between an Element Management System (EMS) and a Network Element (NE), wherein the configuration data of the NE is divided into a plurality of layers such that different layers comprise different configuration data sets of minimum units, and wherein a minimum unit identifier word is provided for each layer to identify any changes to the configuration data in the layer, the method comprising:

if the configuration data of the NE is changed, the NE changing the minimum unit identifier word of the layer corresponding to the changed configuration data;

the EMS obtaining the changed minimum unit identifier word from the NE; and

the EMS comparing the obtained minimum unit identifier word with a minimum unit identifier word stored in the EMS to determine which layer is associated with the changed configuration data; and

the EMS synchronizing the changed configuration data of corresponding NE with the EMS;

wherein the minimum unit identifier word comprises:

a sequence number identifier word that identifies a minimum configuration unit item with a sequence number;

a network management table identifier word that is a configuration word and comprises configuration tables of all the network management devices supported by the NE;

a mixed identifier word;

or any combination thereof;

wherein the mixed identifier word comprises a configuration device identifier, a changing time identifier, a configuration item identifier, or any combination thereof.

2. (Canceled)

3. (Currently Amended) The method[[,]] according to claim 1, wherein the layers comprise an NE configuration data layer, a service configuration data layer, and a table configuration data layer; and

[[W]]wherein the NE configuration data layer represents the collection of all the data of the NE, the configuration data of the NE is divided into the service configuration data layer according to a service characteristic, and the table configuration data layer is determined on the basis of service characteristics classification.

4. (Original) The method according to claim 3, further comprising:

dividing the configuration data in the table configuration data layer into row content layers.

5-7. (Canceled)

8. (Previously Presented) The method according to claim 1, wherein the step of changing the minimum unit identifier word of the configuration data layer corresponding to the changed configuration data comprises:

determining which layer is associated with the changed configuration data; and
modifying the minimum unit identifier word of the layer associated with the changed configuration data and any higher layers.

9. (Currently Amended) The method according to claim 1, further comprising:

determining which EMS has changed the configuration data of the NE;
setting an operation user identifier word corresponding to the EMS that changed the configuration data;
the EMS obtaining the operation user identifier word from the NE; and
the EMS comparing the received operation user identifier word with the operation user identifier word stored in the EMS to judge whether it is the EMS ~~is the~~ EMS that has changed the configuration data, and if not, executing the step of synchronizing the configuration data.

10. (Previously Presented) The method according to claim 9, wherein the minimum unit identifier word assigned for each configuration data layer further comprises the operation user identifier word;

if the configuration data of the NE is changed, the NE determining which layer is associated with the changed configuration data;

modifying the minimum unit identifier words of the layer associated with the changed configuration data and any higher layers; and

modifying the operation user identifier words comprised in the minimum unit identifier words.

11. (Previously Presented) The method according to claim 1, wherein the NE is in communication with a plurality of EMSs, wherein the NE sends a configuration changed event notification to the EMSs, and wherein the configuration changed event notification comprises the changed minimum unit identifier word.

12. (Previously Presented) The method according to claim 11, wherein the step of the NE sending configuration changed event notification to EMSs comprises:

the NE postponing sending the configuration changed event notification to the EMSs for a predefined period of time; and

if the configuration is changed again during the predefined time, the NE will not send the configuration changed event notification until at least one new change is finished.

13. (Previously Presented) The method according to claim 11, wherein the step of the NE sending the configuration changed event notification to the EMSs comprises:

if the NE continuously receives configuration commands from multiple different EMSs or a batch processing configuration commands from a single EMS, the NE will not send the configuration changed event notification to the EMSs until all the corresponding configurations are finished.

14. (Previously Presented) The method according to claim 1, wherein the EMS actively queries the NE for the minimum unit identifier word.

15. (Previously Presented) The method according to claim 1, wherein the EMS compares the obtained minimum unit identifier word with a minimum unit identifier word stored in the EMS to determine which layer is associated with the changed configuration data, and wherein the configuration data changes comprises:

the EMS comparing the obtained minimum unit identifier word with the minimum unit identifier word stored in the EMS;

if the obtained minimum unit identifier word and the minimum unit identifier word stored in the EMS are not identical, determining that the configuration data of the layer corresponding to the minimum unit identifier word is changed, and the configuration data changes according to a change detail of the minimum unit identifier word.

16. (Previously Presented) The method according to claim 1, wherein the step of the EMS synchronizing the changed configuration data of the corresponding NE comprises:

the EMS comparing the changed configuration data with that stored in a history record of the EMS to determine the changes of the configuration data, and then synchronizing the configuration data according to the changes of the configuration data of the NE.

17. (Previously Presented) The method according to claim 16, wherein the step of synchronizing the configuration data by the EMS according to the changes of the configuration data of the NE comprises:

the EMS synchronizing the configuration data at a specified time.

18. (Previously Presented) The method according to claim 16, wherein the step of synchronizing the configuration data by the EMS according to the changes of the configuration data of the NE comprises:

the EMS synchronizing the configuration data immediately in response to receiving the changed minimum unit identifier word and an operation user identifier word.

19. (Previously Presented) The method according to claim 16, wherein the step of synchronizing the configuration data by the EMS according to the changes of the configuration data of the NE comprises:

after receiving the changed minimum unit identifier word and an operation user identifier word, the EMS delaying a predefined period of time before synchronizing the configuration data.

20. (Currently Amended) The method according to claim 16, wherein the step of synchronizing the configuration data by the EMS according to the changes of the configuration data of the NE comprises:

setting a manual synchronization command; and
the EMS synchronizing the configuration data according to the manual synchronization command.

21. (Currently Amended) A method comprising:

determining whether a configuration data within a network element (NE) comprises a change, wherein the configuration data is divided into a plurality of layers, and wherein each layer is associated with one of a first plurality of words that each identify any changes to the associated layer;

determining which EMS has changed the configuration data of the NE;

setting an operation user identifier word corresponding to the EMS that changed the configuration data, wherein the first words comprise the operation user identifier word;

if the configuration data of the NE is changed, the NE determining which layer is associated with the changed configuration data;

changing the first words associated with the layers that comprise the change when the configuration data comprises a change;

changing the operation user identifier words comprised in the first words;

sending the first words but not the change to an Element Management System (EMS), wherein the EMS compares the first words to a plurality of second words to judge whether the EMS ~~that~~ has changed the configuration data, and if not, initiates a synchronization process.

22. (Previously Presented) The method according to claim 1, wherein the minimum unit identifier word represents the changed configuration data but does not comprise the changed configuration data.